REMARKS

Claims 1, 3-12, 26, 38-49, 74, 91 and 175-178 are pending in the Application. Claims 1, 3-6, 9-11, 26, 38-43, 45-49, 74, 91, 175 and 178 were rejected, and claims 7, 8, 12 and 44 were objected to in the Office action mailed January 30, 2006. Claims 1, 26, 46, 49, 74, 175 and 178 are amended, and new claims 179-192 are added in this response. Claims 1, 26, 49, 74, 175 and 178-182 are independent claims. Claims 3-12 and 183-185, claims 38-48 and 186, claims 187 and 188, claims 91 and 189, claims 176, 177, 190 and 191, and claim 192 depend either directly or indirectly from independent claims 1, 26, 49, 74, 175 and 178, respectively. Applicants respectfully request reconsideration of claims 1, 3-12, 26, 38-49, 74, 91 and 175-178, and consideration of new claims 179-192, in light of the following remarks.

Amendments to the Specification

The Specification of the Application has been amended to update the status of co-pending application No. 09/454,219 filed December 9, 1999, as required by the Office action. The Specification has also been amended to update the status of co-pending application No. 09/493,458, filed January 28, 2000. The Applicants respectfully submit that no new matter is added by these amendments.

Amendments to the Claims

Claims 1, 26, 49, 74, 175 and 178 have been amended to correct minor typographical errors, and to more clearly define the claimed subject matter. Support for these amendments may be found at least on pages 71-73 and 113-115 of the Specification. Applicants respectfully submit that no new matter is added by these amendments.

Claim 46 has been amended to correct an antecedent basis issue. Applicants respectfully submit that no new matter is added by this amendment.

Objections to the Disclosure

The disclosure was objected to because the status of application No. 09/454,219 had changed since filing of the Application, and the current status was not shown. Applicants have

amended the Specification as shown above to make the required changes. Applicants respectfully submit that these amendment do not add new matter, and request that the objection to the disclosure be withdrawn.

Objections to the Claims

Claims 7, 8, 12 and 44 were objected to in the Office action as being dependent upon a rejected base claim, but were deemed allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The Applicants respectfully traverse the rejection of the respective base claims. However, in an effort to move the Application towards issue, Applicants have rewritten claims 7, 8, 12 and 44 in independent form, respectively, as new claims 179-182, including all of the original limitations of their respective base claims and any intervening claims. Applicants respectfully submit that these amendments overcome the objections to claims 7, 8, 12 and 44. Therefore, the Applicants respectfully request that the objections to claims 7, 8, 12 and 44 be withdrawn.

Claims 26, 46, 74 and 175 were objected to because of informalities. (Office action page 2, item 2) Applicants have amended claims 26, 46, 74 and 175 as set forth above. Applicants believe that the amendments overcome the objections set forth in the Office action, and respectfully request that the objections to claims 26, 46, 74 and 175 be withdrawn.

Rejection of Claims

Claims 1, 3, 26, 45, 47-49, 74, 91 and 175-178 were rejected under 35 U.S.C. §103(a) as being unpatentable over Guy et al. (US 5,187,591, hereinafter "Guy") in view of Bartholomew et al. (US 6,292,479B1, hereinafter "Bartholomew"). The Applicants respectfully traverse the rejection. However, in an effort to further the Application towards allowance, the Applicants have amended independent claims 1, 26, 49, 74, 175 and 178, as shown above.

The Applicants respectfully submit that the Examiner has failed to establish a case of *prima facie* obviousness for at least the reasons provided below. M.P.E.P. §2142 clearly states that "[t]he examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness." The M.P.E.P. §2142 goes on to state that "[t]o establish a *prima facie* case of

obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure."

With regard to amended claim 1, the Applicants respectfully submit that the proposed combination of Guy and Bartholomew fails to teach, suggest, or disclose, for example, a signal processing system, for interfacing telephony devices with packet-based networks, the system comprising a voice exchange for exchanging voice signals between a network line and a packet based network; a full duplex data exchange for exchanging data signals from the network line with data signals from the packet based network, wherein the full duplex data exchange demodulates the data signals from the network line, outputs the demodulated data signals to the packet based network, remodulates demodulated data signals from the packet based network, and outputs the remodulated data signals to the network line; and a resource monitor that monitors processor resources used by one or both of the voice exchange and the data exchange, and that dynamically enables and disables signal processing functionality used by the one or both of the voice exchange and the data exchange to control processor computational load. More specifically, Applicants respectfully submit that Guy and Bartholomew, taken alone or in combination, fail to teach a resource monitor that monitors processor resources used by one or both of the voice exchange and the data exchange, and that dynamically enables and disables signal processing functionality used by the one or both of the voice exchange and the data exchange to control processor computational load, as recited in Applicants' claim 1. In fact, both Guy and Bartholomew are silent with respect to management of resources used by a signal processor, let alone dynamically enabling and disabling signal processing functionality used by the one or both of the voice exchange and the data exchange to control processor computational load. Applicants therefore submit that the proposed combination of Guy and Bartholomew fails to teach all of the limitations of Applicants' claim 1, as required by MPEP §2142.

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Therefore, Applicants believe that claim 1 is allowable over the proposed combination of Guy and Bartholomew, for at least the reasons set forth above. Applicants respectfully submit that claims 3-12 and 183-185 depend either directly or indirectly from amended claim 1. Because claims 3-12 and 183-185 depend from claim 1, Applicants respectfully submit that claims 3-12 and 183-185 are also allowable, for at least the reasons set forth above. Therefore, Applicants respectfully request that the rejection of claims 1 and 3 under 35 U.S.C. §103(a) be withdrawn.

With regard to amended claim 26, the Applicants respectfully submit that the proposed combination of Guy and Bartholomew fails to teach, suggest, or disclose, for example, a signal processing system, comprising a voice exchange for exchanging voice signals between a first telephony device and a packet based network; a full duplex data exchange for exchanging data signals from a second telephony device with demodulated data signals from the packet based network, wherein the full duplex data exchange demodulates data signals from the second telephony device, outputs the demodulated data signals to the packet based network, remodulates demodulated data signals from the packet based network, and outputs the remodulated data signals to the second telephony device; a human voice detector that detects human voice based on pitch period of a voice band signal from one or both of the first and second telephony devices; and a call discriminator for selectively enabling at least one of the voice exchange and the data exchange based at least upon the detection of human voice. More specifically, Applicants respectfully submit that Guy and Bartholomew, taken alone or in combination, fail to teach a human voice detector that detects human voice based on pitch period of a voice band signal from one or both of the first and second telephony devices, as recited in Applicants' claim 26. Instead of detecting human voice, Guy teaches detection of facsimile signals based upon whether an incoming signal is provided at one of a plurality of constant baud rates, and signal bandwidth. (col. 3, line 59 to col. 4, line 52) Bartholomew, on the other hand, is silent with respect to detection and identification of voice band signals as facsimile or voice signals. Applicants therefore submit that the proposed combination of Guy and Bartholomew fails to teach all of the limitations of Applicants' claim 26, as required by MPEP §2142.

Therefore, Applicants believe that claim 26 is allowable over the proposed combination of Guy and Bartholomew, for at least the reasons set forth above. Applicants respectfully submit that claims 38-48 and 186 depend either directly or indirectly from amended claim 26. Because claims

38-48 and 186 depend from claim 26, Applicants respectfully submit that claims 38-38 and 186 are also allowable, for at least the reasons set forth above. Therefore, Applicants respectfully request that the rejection of claims 26, 45, 47 and 48 under 35 U.S.C. §103(a) be withdrawn.

With regard to amended claim 49, the Applicants respectfully submit that the proposed combination of Guy and Bartholomew fails to teach, suggest, or disclose, for example, a method of processing signals, comprising exchanging voice signals between a first network line and a packet based network; demodulating data signals from a second network line for inputting to the packet based network; remodulating demodulated data signals from the packet based network for inputting to the second network. line; simultaneously exchanging the demodulated data signals from the network line with remodulated data signals from the packet based network; and dynamically enabling and disabling signal processing functionality to control processor computational load. To be more specific, the Guy and Bartholomew references, taken alone or in combination, fail to teach or suggest dynamically enabling and disabling signal processing functionality to control processor computational load. Both Guy and Bartholomew are silent with respect to controlling processor computational load, and fail to teach anything with respect to dynamically enabling and disabling signal processing functionality. Applicants therefore submit that the proposed combination of Guy and Bartholomew fails to teach all of the limitations of Applicants' claim 49, as required by MPEP §2142.

Therefore, Applicants believe that claim 49 is allowable over the proposed combination of Guy and Bartholomew, for at least the reasons set forth above. Applicants respectfully submit that claims 187 and 188 depend from amended claim 49. Because claims 187 and 188 depend from claim 49, Applicants respectfully submit that claims 187 and 188 are also allowable, for at least the reasons set forth above. Therefore, Applicants respectfully request that the rejection of claim 49 under 35 U.S.C. §103(a) be withdrawn.

With regard to amended claim 74, the Applicants respectfully submit that the proposed combination of Guy and Bartholomew fails to teach, suggest, or disclose, for example, a method of processing signals, comprising exchanging voice signals between a first telephony device and a packet based network; demodulating data signals from the first telephony device for inputting to the packet based network; remodulating demodulated data signals from the packet based

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network; simultaneously exchanging demodulated data signals from a second telephony device with remodulated data signals from the packet based network; detecting human voice or lack thereof based on pitch period of a voice band signal from one or both of the first and second telephony devices; discriminating between voice signals and data signals based on the detection; and invoking at least one of the voice exchange and the data exchange based on said discrimination. To be more specific, the Guy and Bartholomew references, taken alone or in combination, fail to teach detecting human voice or lack thereof based on pitch period of a voice band signal from one or both of the first and second telephony devices. Instead of detecting human voice, Guy teaches detection of facsimile signals based upon whether an incoming signal is provided at one of a plurality of constant baud rates, and signal bandwidth. (col. 3, line 59 to col. 4, line 52) Bartholomew, on the other hand, is silent with respect to detection and identification of voice band signals as facsimile or voice signals. Applicants therefore submit that the proposed combination of Guy and Bartholomew fails to teach all of the limitations of Applicants' claim 74, as required by MPEP §2142.

Therefore, Applicants believe that claim 74 is allowable over the proposed combination of Guy and Bartholomew, for at least the reasons set forth above. Applicants respectfully submit that claims 91 and 189 depend from amended claim 74. Because claims 91 and 189 depend from claim 74, Applicants respectfully submit that claims 91 and 189 are also allowable, for at least the reasons set forth above. Therefore, Applicants respectfully request that the rejection of claims 74 and 91 under 35 U.S.C. §103(a) be withdrawn.

With regard to claim 175, the Applicants respectfully submit that the proposed combination of Guy and Bartholomew fails to teach, suggest, or disclose, for example, a method for interfacing a plurality of telephony devices with a packet based network, the packet based network adapted for transmission of packetized signals, the method comprising depacketizing an incoming packetized signal from the packet based network; identifying the depacketized signal as a voice signal, a fax signal, or a data signal; if the depacketized signal is a voice signal, performing a voice mode signal processing on the voice signal; if the depacketized signal is a fax signal, performing a fax relay mode signal processing; if the depacketized signal is a data signal, performing a data modem relay mode signal processing; transmitting the depacketized processed signal to a corresponding type of telephony device of the plurality of telephony devices; and

dynamically enabling and disabling signal processing functionality to control processor computational load. More specifically, the Guy and Bartholomew references, taken alone or in combination, fail to teach dynamically enabling and disabling signal processing functionality to control processor computational load. Both Guy and Bartholomew fail to teach anything with respect to controlling processor computational load, and make no mention of dynamically enabling and disabling signal processing functionality. Applicants therefore submit that the proposed combination of Guy and Bartholomew fails to teach all of the limitations of Applicants' claim 175, as required by MPEP §2142.

Therefore, Applicants believe that claim 175 is allowable over the proposed combination of Guy and Bartholomew, for at least the reasons set forth above. Applicants respectfully submit that claims 176, 177, 190 and 191 depend from amended claim 175. Because claims 176, 177, 190 and 191 depend from claim 175, Applicants respectfully submit that claims 176, 177, 190 and 191 are also allowable, for at least the reasons set forth above. Therefore, Applicants respectfully request that the rejection of claims 175-177 under 35 U.S.C. §103(a) be withdrawn.

With regard to claim 178, the Applicants respectfully submit that the proposed combination of Guy and Bartholomew fails to teach, suggest, or disclose, for example, a method for integrated interfacing of a plurality of telephony devices to a packet based network, the packet based network adapted for transmission of packetized signals, the method comprising detecting human voice or lack thereof in a voice band signal based on pitch period of a voice band signal; packetizing a voice signal, a fax signal, or a data signal in a packetization engine to generate a packetized signal, based upon the detecting; and transmitting the packetized signal over the packet based network to a far end telephony device. More specifically, the Guy and Bartholomew references, taken alone or in combination, fail to teach or suggest detecting human voice or lack thereof in a voice band signal based on pitch period of a voice band signal. In addition, neither Guy nor Bartholomew teach packetizing a voice signal, a fax signal, or a data signal in a packetization engine to generate a packetized signal, based upon the detection of human speech. Applicants therefore submit that the proposed combination of Guy and Bartholomew fails to teach all of the limitations of Applicants' claim 178, as required by MPEP §2142.

Therefore, Applicants believe that claim 178 is allowable over the proposed combination of Guy and Bartholomew, for at least the reasons set forth above. Applicants respectfully submit that claim 192 depends from amended claim 178. Because claim 192 depends from claim 178, Applicants respectfully submit that claim 192 is also allowable, for at least the reasons set forth above. Therefore, Applicants respectfully request that the rejection of claim 178 under 35 U.S.C. §103(a) be withdrawn.

Claims 4-6 and 9-11 were rejected under 35 U.S.C. §103(a) as being unpatentable over Guy in view of Bartholomew as applied to claim 1 above, and further in view Ohlsson et al. (US 6,452,950, hereinafter "Ohlsson"). The Applicants respectfully submit that claims 3-12 and 183-185 depend either directly or indirectly from independent claim 1. Applicants believe that amended claim 1 is allowable over the proposed combination of references, in that Ohlsson fails to overcome the deficiencies of Guy and Bartholomew, as set forth above. Because claims 3-12 and 183-185 depend from independent claim 1, Applicants respectfully submit that claims 3-12 and 183-185 are allowable over the proposed combination of Guy, Bartholomew and Ohlsson, as well. Therefore, for at least the reasons set forth above, Applicants respectfully request that the rejection of claims 4-6 and 9-11 under 35 U.S.C. §103(a) be withdrawn.

Claims 38-43 were rejected under 35 U.S.C. §103(a) as being unpatentable over Guy in view of Bartholomew as applied to claim 26 above, and further in view Elliott et al. (US 6,614,781, hereinafter "Elliott"). The Applicants respectfully submit that claims 38-48 and 186 depend either directly or indirectly from independent claim 26. Applicants believe that amended claim 26 is allowable over the proposed combination of references, in that Elliott fails to overcome the deficiencies of Guy and Bartholomew, as set forth above. Because claims 38-48 and 186 depend from independent claim 26, Applicants respectfully submit that claims 38-48 and 186 are allowable over the proposed combination of Guy, Bartholomew and Elliott, as well. Therefore, for at least the reasons set forth above, Applicants respectfully request that the rejection of claims 38-43 under 35 U.S.C. §103(a) be withdrawn.

Claim 46 was rejected under 35 U.S.C. §103(a) as being unpatentable over Guy in view of Bartholomew as applied to claims 26 and 45 above, and further in view Oran. (US 6,775,265). The

Applicants respectfully submit that claims 38-48 and 186 depend either directly or indirectly from independent claim 26. Applicants believe that amended claim 26 is allowable over the proposed combination of references, in that Oran fails to overcome the deficiencies of Guy and Bartholomew, as set forth above. Because claims 38-48 and 186 depend from independent claim 26, Applicants respectfully submit that claims 38-48 and 186 are allowable over the proposed combination of Guy, Bartholomew and Oran, as well. Therefore, for at least the reasons set forth above, Applicants respectfully request that the rejection of claims 46 under 35 U.S.C. §103(a) be withdrawn.

Newly Added Claims

Applicants have added new independent claims 179-182 and new dependent claims 183-192, as described above. Claims 183-185, claim 186, claims 187 and 188, claim 189, claims 190 and 191, and claim 192 depend, respectively from independent claims 1, 26, 49, 74, 175 and 178. Support for claims 184, 185, 187, 188, 190 and 191 may be found at least on pages 71-73 of the Specification. Support for claims 186, 189 and 192 may be found at least on pages 113-115 of the Specification. Applicants respectfully submit that these new claims do not add new matter.

Conclusion

The Applicants believe that in light of the reasons set forth above, all of claims 1, 3-12, 26, 38-49, 74, 91 and 175-192 are in condition for allowance. Should the Examiner disagree or have any questions regarding this submission, the Applicants invite the Examiner to telephone the undersigned at (312) 775-8000.
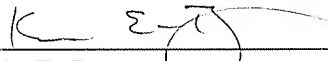
A Notice of Allowability is courteously solicited.

The Commissioner is hereby authorized to charge any additional fees associated with this communication, or credit any overpayment, to Deposit Account No. 13-0017.

Respectfully submitted,

Dated: _____June 30, 2006_____   _____
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